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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,173	10/23/2003	Toshihiko Ouchi	1232-5184	2615
27123	7590	08/23/2005	EXAMINER	
MORGAN & FINNEGAN, L.L.P.			DOAN, JENNIFER	
3 WORLD FINANCIAL CENTER			ART UNIT	
NEW YORK, NY 10281-2101			PAPER NUMBER	

2874  
DATE MAILED: 08/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/693,173

Applicant(s)

OUCHI, TOSHIHIKO

Examiner

Jennifer Doan

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-7 is/are rejected.
- 7) ☒ Claim(s) 2-4 and 8-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 082504.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The prior art documents submitted by applicant in the Information Disclosure Statement filed on 8/25/04, have all been considered and made of record (note the attached copy of form PTO-1449).

### ***Drawings***

3. The formal drawings, filed on 10/23/2003, are accepted.

### ***Specification***

4. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1 and 5-7 are rejected under 35 U.S.C. 102(e) as being anticipated by Bona et al. (U.S. Patent 6,766,083).

With respect to claim 1, Bona et al. (figures 3 and 4) disclose an optical interconnection device comprising an optical waveguide layer (10, 11), wherein the waveguide layer (10, 11) is equipped with a plurality of electrodes (51, 52) which are independently drive-controllable such that a refractive index distribution is generated in the waveguide layer by drive control of the electrodes to control a propagation state of light in the waveguide layer (column 4, lines 52- 63), and an optical interconnection port (see figure 3) is provided on an upper or lower surface or inside of the waveguide layer (10, 11).

With respect to claim 5, Bona et al. (figures 3 and 4) disclose the optical interconnection device, wherein the drive-controllable electrodes are divided in plurality (51, 52) and provided on one side or both sides of the waveguide layer (10, 11).

With respect to claim 6, Bona et al. (column 4, lines 52- 63) disclose the optical interconnection device, wherein the drive-controllable electrodes are a plurality of heaters (210) provided on a surface of the waveguide layer (10, 11) and a refractive index distribution is generated in the waveguide layer by temperature control with the electrodes (51, 52).

With respect to claim 7, Bona et al. (figures 3 and 4) disclose the optical interconnection device, wherein the drive-controllable electrodes (51, 52) are provided in plurality on a surface of the waveguide layer (10, 11) so as to enable local electric-field application and a refractive index distribution is generated in the waveguide layer by electric-field control with the electrodes (column 4, lines 52- 63).

***Allowable Subject Matter***

7. Claims 2-4 and 8-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art fails to disclose or reasonably suggest the optical interconnection device, wherein the optical interconnection port is comprised of an optical element for receiving or emitting a light in a direction approximately perpendicular to a light-waveguiding surface and an optical path conversion means provided corresponding to the optical element at a given position in the waveguide layer as recited in claim 2; further a photoelectric mixedly mounted device comprising integrally the optical interconnection device, an electronic device connected to an optical interconnection port provided in the optical interconnection device and an electric wiring layer as recited in claim 8.

Claims 3 and 4 depend from claim 2.

Claims 9-17 depend from claim 8.

**Conclusion**

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00 am to 3:30 pm, second Friday off.
9. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.
10. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer Doan

Patent Examiner

August 19, 2005